

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) A method to provide a signal via a communication link, comprising the steps of:

providing an information storage and retrieval system comprising a controller, device adapter interconnected to said controller and comprising a first communication link control card comprising a first connector, a first RAID rank comprising a first array of disk drives, a second RAID rank comprising a second array of disk drives, a communication loop comprising a second communication link control card wherein said communication loop interconnects said first RAID rank and said second RAID rank;

providing a communication link comprising a length, an end, a second connector disposed on said end, and a passive transponder disposed on said second connector, wherein said passive transponder includes a memory comprising information including said length;

interconnecting said ~~first communication link control card and said second communication link control card using said communication link~~ first connector and said second connector, such that said second connector is disposed external to said device adapter;

wirelessly reading said information from said memory by ~~[[either]] said first communication link control card or by said second communication link control card~~; and

adjusting a pre-emphasis level of said signal based upon said information.

2. (previously presented) The method of claim 1, wherein said first communication

link control card comprises a reading device, further comprising the steps of:

interconnecting said communication link to said communication link control card, such that said reading device is capable of reading said information from said memory.

3. (previously presented) The method of claim 1, wherein said communication link comprises a length, and wherein said passive transponder comprises a length data field; further comprising the steps of:

encoding said length in said length data field;

reading said length from said length data field;

adjusting said pre-emphasis of said signal based upon said length.

4. (original) The method of claim 1, wherein said signal comprises an actual throughput rate and wherein said communication link comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field, further comprising the steps of:

encoding said nominal throughput rate in said throughput data field;

reading said nominal throughput rate from said throughput data field;

determining if said nominal throughput rate is greater than or equal to said actual throughput rate;

operative if said nominal throughput rate is not greater than or equal to said actual throughput rate, generating an error message.

5. (original) The method of claim 1, wherein said communication link comprises a cable type, and wherein said passive transponder comprises a cable identifier data field, further comprising the steps of:

encoding said cable type in said cable identifier data field;  
reading said cable type from said cable identifier data field,  
providing a signal comprising said cable type.

6. (original) The method of claim 5, further comprising the step of detecting the interconnection of said communication link to said communication link control card.

7. (original) The method of claim 1, wherein said communication link comprises a version number, and wherein said passive transponder comprises a version identifier data field, further comprising the steps of:

encoding said version number in said version identifier data field;  
reading said version number from said version identifier data field, and  
providing a signal comprising said version number.

8. Canceled.

9. (currently amended) An article of manufacture comprising a controller, a device adapter interconnected to said controller and comprising a first communication link control card comprising a first connector, a first RAID rank comprising a first array of disk drives, a second RAID rank comprising a second array of disk drives, a communication loop comprising a second communication link control card wherein said communication loop interconnects said first RAID rank and said second RAID rank, and a computer useable medium having computer readable program code disposed therein to provide a signal via a communication link, wherein said communication link comprises a length, an end, a second connector disposed on said end, and a passive transponder disposed on said second connector, wherein said first connector is interconnected to said second connector, such that said second connector is disposed external to

said device adapter, wherein said passive transponder includes a memory comprising information including said length, the computer readable program code comprising a series of computer readable program steps to effect:

wirelessly reading said information from said memory by either said first communication link control card or by said second communication link control card; and adjusting a pre-emphasis level of said signal based upon said information.

10. (previously presented) The article of manufacture of claim 9, wherein said first communication link control card comprises a reading device, wherein said communication link is interconnected to said communication link control card such that said reading device is capable of reading information from said one or more data fields.

11. (previously presented) The article of manufacture of claim 9, wherein said communication link comprises a length, and wherein said passive transponder comprises a length data field, and wherein said length is encoded in said length data field, said computer readable program code further comprising a series of computer readable program steps to effect:

reading said length from said length data field;  
adjusting said pre-emphasis of said signal based upon said length.

12. (original) The article of manufacture of claim 9, wherein said signal comprises an actual throughput rate, and wherein said communication link comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field, and wherein said nominal throughput rate is encoded in said throughput data field, said computer readable program code further comprising a series of computer readable program steps to effect:

reading said nominal throughput rate from said throughput data field;  
determining if said nominal throughput rate is greater than or equal to said actual throughput rate;  
operative if said nominal throughput rate is not greater than or equal to said actual throughput rate, generating an error message.

13. (original) The article of manufacture of claim 9, wherein said communication link comprises a cable type, and wherein said passive transponder comprises a cable identifier data field, and wherein said cable type is encoded in said cable identifier data field, said computer readable program code further comprising a series of computer readable program steps to effect:

reading said cable type from said cable identifier data field;  
providing a signal comprising said cable type.

14. (original) The article of manufacture of claim 13, said computer readable program code further comprising a series of computer readable program steps to effect detecting the interconnection of said communication link to said communication link control card.

15. (original) The article of manufacture of claim 9, wherein said communication link comprises a version number, and wherein said passive transponder comprises a version identifier data field, and wherein said version number is encoded in said version identifier data field, said computer readable program code further comprising a series of computer readable program steps to effect:

reading said version number from said version identifier data field, and  
providing a signal comprising said version number.

16. (original) The article of manufacture of claim 15, said computer readable program code further comprising a series of computer readable program steps to effect detecting the interconnection of said communication link to said communication link control card.

17. (currently amended) A computer program product encoded in a non-transitory information storage medium and usable with a programmable computer processor to provide a signal via a communication link wherein said computer program product is disposed in an information storage and retrieval system comprising a device adapter interconnected to said programmable computer processor, and comprising a first communication link control card comprising a first connector, a first RAID rank comprising a first array of disk drives, a second RAID rank comprising a second array of disk drives, a communication loop comprising a second communication link control card wherein said communication loop interconnects said first RAID rank and said second RAID rank, to provide a signal via a communication link, wherein said communication link a length, an end, a second connector disposed on said end, and a passive transponder disposed on said second connector, wherein said first connector is interconnected to said second connector such that said second connector is disposed external to said device adapter, and wherein said passive transponder includes a memory comprising information including said length, comprising:

computer readable program code which causes said programmable computer processor to wirelessly read said information from said memory by either said first communication link control card or by said second communication link control card; and

computer readable program code which causes said programmable computer processor to adjust a pre-emphasis level of said signal based upon said information.

18. (previously presented) The computer program product of claim 17, wherein said first communication link control card comprising a reading device such that said reading device is capable of reading said information from said memory.

19. (previously presented) The computer program product of claim 17, wherein said communication link comprises a length, and wherein said passive transponder comprises a length data field, and wherein said length is encoded in said length data field, further comprising:

computer readable program code which causes said programmable computer processor to read said length from said length data field;

computer readable program code which causes said programmable computer processor to adjust said pre-emphasis of said signal based upon said length.

20. (original) The computer program product of claim 17, wherein said signal comprises an actual throughput rate, and wherein said communication link comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field, and wherein said nominal throughput rate is encoded in said throughput data field, further comprising:

computer readable program code which causes said programmable computer processor to read said nominal throughput rate from said throughput data field;

computer readable program code which causes said programmable computer processor to determine if said nominal throughput rate is greater than or equal to said actual throughput rate;

computer readable program code which, if said nominal throughput rate is not greater

than or equal to said actual throughput rate, causes said programmable computer processor to generate an error message.

21. (original) The computer program product of claim 17, wherein said communication link comprises a cable type, and wherein said passive transponder comprises a cable identifier data field, and wherein said cable type is encoded in said cable identifier data field, further comprising:

computer readable program code which causes said programmable computer processor to read said cable type from said cable identifier data field,

computer readable program code which causes said programmable computer processor to provide a signal comprising said cable type.

22. (original) The computer program product of claim 21, further comprising computer readable program code which causes said programmable computer processor to detect the interconnection of said communication link to said communication link control card.

23. (original) The computer program product of claim 17, wherein said communication link comprises a version number, and wherein said passive transponder comprises a version identifier data field, and wherein said version number is encoded in said version identifier data field, further comprising:

computer readable program code which causes said programmable computer processor to read said version number from said version identifier data field, and

computer readable program code which causes said programmable computer processor to provide a signal comprising said version number.

24. (original) The computer program product of claim 23, further comprising computer



readable program code which causes said programmable computer processor to detect the interconnection of said communication link to said communication link control card.

25. (currently amended) A data storage and retrieval system, comprising:

a controller;

a device adapter interconnected to said controller and comprising a first communication link control card comprising a first connector and a first reading device;

a first RAID rank comprising a first array of disk drives;

a second RAID rank comprising a second array of disk drives;

a communication loop comprising a second communication link control card wherein said communication loop interconnects said first RAID rank and said second RAID rank;

a communication link comprising a length, an end, a second connector disposed on said end, and a passive transponder disposed on said connector, wherein said passive transponder includes a memory comprising information including said length;

wherein ~~said communication link interconnects said first communication link control card and said second communication link control card~~ said first connector is connector is interconnected with said second connector such that said second connector is disposed external to said device adapter and such that information from said memory by be wirelessly read by either said first communication link control card or by said second communication link control card to adjust a pre-emphasis level of a signal provided by said communication link.

26. (previously presented) The data storage and retrieval system of claim 25, further comprising:

wherein said communication link interconnects said first communication link control

card and said second communication link control card, such that either said first reading device or said second reading device can read said information from said memory.

27. (original) The data storage and retrieval system of claim 25, wherein said passive transponder comprises a length data field, and wherein said length is encoded in said length data field.

28. (original) The data storage and retrieval system of claim 25, wherein said communication link comprises a fiber channel communication link, and wherein said passive transponder comprises a cable-type data field, and wherein said cable-type data field indicates that said communication link comprises a fiber channel communication link.

29. (original) The data storage and retrieval system of claim 25, wherein said communication link further comprises a nominal throughput rate, and wherein said passive transponder comprises a throughput data field, and wherein said nominal throughput rate is encoded in said throughput data field.

30. (original) The data storage and retrieval system of claim 25, wherein said communication link further comprises a cable version number, and wherein said passive transponder comprises a version data field, and wherein said version number is encoded in said version data field.